

**FEDERALLY ENFORCEABLE STATE  
OPERATING PERMIT (FESOP)  
OFFICE OF AIR QUALITY**

**Meshberger Brothers Stone Corporation  
1972 West State Road 28  
Ridgeville, Indiana 47380**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: F 135-14643-03158	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: January 24, 2002  Expiration Date: January 24, 2007

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## SECTION A

## SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

### A.1 General Information [326 IAC 2-8-3(b)]

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The Permittee owns and operates a stationary hot mix asphalt source.

Authorized Individual:	W. Craig Coshow
Source Address:	1972 West State Road 28, Ridgeville, Indiana 47380
Mailing Address:	P.O. Box 345 Berne, Indiana 46711
General Source Phone Number:	219-334-5311
SIC Code:	3159
County Location	Randolph
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit (FESOP) Minor Source, under PSD Rules; Minor Source, Section 112 of the Clean Air Act

### A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

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This stationary source consists of the following emission units and pollution control devices:

- (a) One (1) aggregate dryer, known as EU#4 and one (1) natural gas with backup No. 2 fuel oil fired burner, known as EU#5, exhausted to SV#1, equipped with a baghouse, known as EU#19 and a cyclone, known as EU#16, rated at 85.0 million British thermal units per hour.
- (b) One (1) batch pugmill mixer, known as EU#10, capacity: 200 tons of asphalt per hour.
- (c) One (1) cold feed system consisting of cold feed bins and conveyors, capacity: 250 tons of asphalt per hour.
- (d) One (1) hot storage bin and conveyor system, capacity: 200 tons of asphalt per hour.
- (e) One (1) liquid asphalt tank, known as EU#13, equipped with a natural gas fired hot oil transfer heater, rated at 0.700 million British thermal units per hour, capacity: 30,000 gallons of liquid asphalt (deemed an insignificant activity).
- (f) One (1) natural gas fired transfer heater associated with the slat conveyor and the batch plant, known as EU#33, rated at 0.500 million British thermal units per hour (deemed an insignificant activity).
- (g) One No. 2 fuel oil storage tank, known as EU#32, capacity: 8,000 gallons of No. 2 fuel oil.

### A.3 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-8-3(c)(3)(I)]

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This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.
- (b) A laboratory as defined in 326 IAC 2-7-1(21)(D).

A.4 FESOP Applicability [326 IAC 2-8-2]

This stationary source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) for a Federally Enforceable State Operating Permit (FESOP).

A.5 Prior Permit Conditions

- (a) This permit shall be used as the primary document for determining compliance with applicable requirements established by previously issued permits.
- (b) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, including any term or condition from a previously issued construction or operation permit, IDEM, OAQ, shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued.

## SECTION B

## GENERAL CONDITIONS

### B.1 Permit No Defense [IC 13]

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a FESOP under 326 IAC 2-8.

### B.2 Definitions [326 IAC 2-8-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2, and 326 IAC 2-7) shall prevail.

### B.3 Permit Term [326 IAC 2-8-4(2)]

This permit is issued for a fixed term of five (5) years from the original date, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date.

### B.4 Enforceability [326 IAC 2-8-6]

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

### B.5 Termination of Right to Operate [326 IAC 2-8-9] [326 IAC 2-8-3(h)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-8-3(h) and 326 IAC 2-8-9.

### B.6 Severability [326 IAC 2-8-4(4)]

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

### B.7 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]

This permit does not convey any property rights of any sort, or any exclusive privilege.

### B.8 Duty to Supplement and Provide Information [326 IAC 2-8-3(f)] [326 IAC 2-8-4(5)(E)] [326 IAC 2-8-5(a)(4)]

- (a) The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

The submittal by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ, may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1). Upon request, the Permittee shall also furnish to IDEM,

OAQ, copies of records required to be kept by this permit or, for information claimed to be confidential, the Permittee may furnish such records directly to the U. S. EPA along with a claim of confidentiality.[326 IAC 2-8-4(5)(E)]

- (c) The Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

**B.9 Compliance Order Issuance [326 IAC 2-8-5(b)]**

IDEM, OAQ may issue a compliance order to this Permittee upon discovery that this permit is in nonconformance with an applicable requirement. The order may require immediate compliance or contain a schedule for expeditious compliance with the applicable requirement.

**B.10 Compliance with Permit Conditions [326 IAC 2-8-4(5)(A)] [326 IAC 2-8-4(5)(B)]**

- (a) The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for:
  - (1) Enforcement action;
  - (2) Permit termination, revocation and reissuance, or modification; and
  - (3) Denial of a permit renewal application.
- (b) It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- (c) An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

**B.11 Certification [326 IAC 2-8-3(d)] [326 IAC 2-8-4(3)(C)(i)] [326 IAC 2-8-5(1)]**

- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by an authorized individual of truth, accuracy, and completeness. This certification, shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification.
- (c) An authorized individual is defined at 326 IAC 2-1.1-1(1).

**B.12 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]**

- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in letter form no later than July 1 of each year to:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
  - (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
  - (2) The compliance status;
  - (3) Whether compliance was continuous or intermittent;
  - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and
  - (5) Such other facts as specified in Sections D of this permit, IDEM, OAQ, may require to determine the compliance status of the source.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

B.13 Preventive Maintenance Plan [326 IAC 1-6-3] [326 IAC 2-8-4(9)] [326 IAC 2-8-5(a)(1)]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, including the following information on each facility:
  - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
  - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
  - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

The PMP and the PMP extension notification do not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).



- (b) The Permittee shall implement the PMPs as necessary to ensure that failure to implement a PMP does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or contributes to any violation. The PMP does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (d) Records of preventive maintenance shall be retained for a period of at least five (5) years. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

**B.14 Emergency Provisions [326 IAC 2-8-12]**

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation, except as provided in 326 IAC 2-8-12.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describes the following:
  - (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
  - (2) The permitted facility was at the time being properly operated;
  - (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
  - (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;  
  
Telephone No.: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section)  
or,  
Telephone No.: 317-233-5674 (ask for Compliance Section)  
Facsimile No.: 317-233-5967  
  
Failure to notify IDEM, OAQ by telephone or facsimile within four (4) daytime business hours after the beginning of the emergency, or after the emergency is discovered or reasonably should have been discovered, shall constitute a violation of 326 IAC 2-8 and any other applicable rules. [326 IAC 2-8-12(f)]
  - (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-8-4(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;
- (B) Any steps taken to mitigate the emissions; and
- (C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
- (e) IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAQ, by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.
- (g) Operations may continue during an emergency only if the following conditions are met:
  - (1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
  - (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:
    - (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and
    - (B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

Any operations shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]

- (a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provision), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. A deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report.

The Quarterly Deviation and Compliance Monitoring Report does require the certification by the "responsible official" as defined by 326 IAC 2-1.1-1(1).

- (b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.
- (c) Emergencies shall be included in the Quarterly Deviation and Compliance Monitoring Report.

B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-4(5)(C)] [326 IAC 2-8-7(a)] [326 IAC 2-8-8]

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a FESOP modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)] The notification by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:
- (1) That this permit contains a material mistake.
  - (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
  - (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-8-8(a)]
- (c) Proceedings by IDEM, OAQ, to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-8-8(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ, at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ, may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

**B.17 Permit Renewal [326 IAC 2-8-3(h)]**

- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ, and shall include the information specified in 326 IAC 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, IN 46206-6015

- (b) Timely Submittal of Permit Renewal [326 IAC 2-8-3]

- (1) A timely renewal application is one that is:

- (A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
- (B) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

- (2) If IDEM, OAQ, upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect until the renewal permit has been issued or denied.

- (c) Right to Operate After Application for Renewal [326 IAC 2-8-9]

If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ, any additional information identified as needed to process the application.

**B.18 Permit Amendment or Revision [326 IAC 2-8-10] [326 IAC 2-8-11.1]**

- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 whenever the Permittee seeks to amend or modify this permit.

- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

Any such application shall be certified by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) The Permittee may implement the administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.19 Operational Flexibility [326 IAC 2-8-15]

- (a) The Permittee may make any change or changes at this source that are described in 326 IAC 2-8-15(b) through (d), without prior permit revision, if each of the following conditions is met:

- (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
- (2) Any approval required by 326 IAC 2-8-11.1 has been obtained;
- (3) The changes do not result in emissions which exceed the emissions allowable under this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
- (4) The Permittee notifies the:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

and

United States Environmental Protection Agency, Region V  
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

- (5) The Permittee maintains records on-site which document, on a rolling five (5) year basis, all such changes and emissions trading that are subject to 326 IAC 2-8-15(b) through (d) and makes such records available, upon reasonable request, to public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ, in the notices specified in 326 IAC 2-8-15(b), (c)(1), and (d).

- (b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-8-15(a) and the following additional conditions:

- (1) A brief description of the change within the source;
- (2) The date on which the change will occur;
- (3) Any change in emissions; and

- (4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted is not considered an application form, report or compliance certification. Therefore, the notification by the Permittee does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) Emission Trades [326 IAC 2-8-15(c)]

The Permittee may trade increases and decreases in emissions in the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(c).

- (d) Alternative Operating Scenarios [326 IAC 2-8-15(d)]

The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ or U.S. EPA is required.

B.20 Permit Revision Requirement [326 IAC 2-8-11.1]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-8-11.1.

B.21 Inspection and Entry [326 IAC 2-8-5(a)(2)] [IC 13-14-2-2]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a FESOP source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.22 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

- (a) The Permittee must comply with the requirements of 326 IAC 2-8-10 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Permits Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

The application which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-11(b)(3)]

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16]

- (a) The Permittee shall pay annual fees to IDEM, OAQ, within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.
- (b) Failure to pay may result in administrative enforcement action, or revocation of this permit.
- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-0425 (ask for OAQ, Technical Support and Modeling Section), to determine the appropriate permit fee.

## SECTION C

## SOURCE OPERATION CONDITIONS

Entire Source
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### Emissions Limitations and Standards [326 IAC 2-8-4(1)]

#### C.1 Overall Source Limit [326 IAC 2-8]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

(a) Pursuant to 326 IAC 2-8:

- (1) The potential to emit any regulated pollutant, except particulate matter (PM), from the entire source shall be limited to less than one-hundred (100) tons per twelve (12) consecutive month period. This limitation shall also make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable;
- (2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and
- (3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

(b) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source's potential to emit does not exceed the above specified limits.

(c) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

#### C.2 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

#### C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

#### C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2(3)]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and in 326 IAC 9-1-2.



C.5 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

C.6 Operation of Equipment [326 IAC 2-8-5(a)(4)]

Except as otherwise provided by statute, rule or in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.

C.7 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted.

C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
  - (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
  - (2) If there is a change in the following:
    - (A) Asbestos removal or demolition start date;
    - (B) Removal or demolition contractor; or
    - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management  
Asbestos Section, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The

notifications do not require a certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (e) **Procedures for Asbestos Emission Control**  
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-4 emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) **Indiana Accredited Asbestos Inspector**  
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement that the inspector be accredited, pursuant to the provisions of 40 CFR 61, Subpart M, is federally enforceable.

### **Testing Requirements [326 IAC 2-8-4(3)]**

#### **C.9 Performance Testing [326 IAC 3-6]**

- (a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ, not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ, if the source submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

### **Compliance Requirements [326 IAC 2-1.1-11]**

#### **C.10 Compliance Requirements [326 IAC 2-1.1-11]**

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

**Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]**

**C.11 Compliance Monitoring [326 IAC 2-8-4(3)] [326 IAC 2-8-5(a)(1)]**

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

in writing, prior to the end of the initial ninety (90) day compliance schedule with full justification of the reasons for inability to meet this date.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Unless otherwise specified in the approval for the new emissions unit, compliance monitoring for new emission units or emission units added through a permit revision shall be implemented when operation begins.

**C.12 Maintenance of Emission Monitoring Equipment [326 IAC 2-8-4(3)(A)(iii)]**

- (a) In the event that a breakdown of the emission monitoring equipment occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem. To the extent practicable, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less frequent than required in Section D of this permit until such time as the monitoring equipment is back in operation. In the case of continuous monitoring, supplemental or intermittent monitoring of the parameter should be implemented at intervals no often less than once an hour until such time as the continuous monitor is back in operation.
- (b) The Permittee shall install, calibrate, quality assure, maintain, and operate all necessary monitors and related equipment. In addition, prompt corrective action shall be initiated whenever indicated.

**C.13 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]**

Any monitoring or testing performed required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60 Appendix B, 40 CFR 63 or other approved methods as specified in this permit.

**C.14 Pressure Gauge and Other Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)] [326 IAC 2-8-5(1)]**

- (a) Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ( $\pm 2\%$ ) of full scale reading.
- (b) Whenever a condition in this permit requires the measurement of a temperature, flow rate, or pH level, the instrument employed shall have a scale such that the expected normal

reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (  $\pm 2\%$ ) of full scale reading.

- (c) The Permittee may request the IDEM, OAQ approve the use of a pressure gauge or other instrument that does not meet the above specifications provided the Permittee can demonstrate an alternative pressure gauge or other instrument specification will adequately ensure compliance with permit conditions requiring the measurement of pressure drop or other parameters.

**Corrective Actions and Response Steps [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]**

**C.15 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]**

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Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

- (a) The Permittee shall prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.
- (b) These ERPs shall be submitted for approval to:  
  
Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015  
  
within 180 days from the date on which this source commences operation).  
  
The ERP does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) If the ERP is disapproved by IDEM, OAQ, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.
- (d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.
- (e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.
- (f) Upon direct notification by IDEM, OAQ, that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

**C.16 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68.215]**

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If a regulated substance, subject to 40 CFR 68, is present at a source in more than a threshold quantity, 40 CFR 68 is an applicable requirement and the Permittee shall submit:

- (a) A compliance schedule for meeting the requirements of 40 CFR 68; or
- (b) As a part of the annual compliance certification submitted under 326 IAC 2-7-6(5), a certification statement that the source is in compliance with all the requirements of 40 CFR 68, including the registration and submission of a Risk Management Plan (RMP); and

All documents submitted pursuant to this condition shall include the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

C.17 Compliance Response Plan - Failure to Take Response Steps [326 IAC 2-8-4] [326 IAC 2-8-5]

- (a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. A CRP shall be submitted to IDEM, OAQ upon request. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on site, and comprised of:
  - (1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected timeframe for taking reasonable response steps.
  - (2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan to include such response steps taken.
- (b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:
  - (1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan; or
  - (2) If none of the reasonable response steps listed in the Compliance Response Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.
  - (3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, the IDEM, OAQ shall be promptly notified of the expected date of the shut down, the status of the applicable compliance monitoring parameter with respect to normal, and the results of the actions taken up to the time of notification.
  - (4) Failure to take reasonable response steps shall constitute a violation of the permit.
- (c) The Permittee is not required to take any further response steps for any of the following reasons:
  - (1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.
  - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied.
  - (3) An automatic measurement was taken when the process was not operating.

- (4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.
- (d) When implementing reasonable steps in response to a compliance monitoring condition, if the Permittee determines that an exceedance of an emission limitation has occurred, the Permittee shall report such deviations pursuant to Section B-Deviations from Permit Requirements and Conditions.
- (e) The Permittee shall record all instances when response steps are taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.
- (f) Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for time necessary to perform quality assurance and maintenance activities.

**C.18 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4] [326 IAC 2-8-5]**

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The documents submitted pursuant to this condition do require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

**Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]**

**C.19 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]**

- (a) Records of all required data, reports and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

**C.20 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]**

- (a) The source shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Devia-

tion and Compliance Monitoring Report shall include the certification by the “authorized individual” as defined by 326 IAC2-1.1-1(1).

- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the “authorized individual” as defined by 326 IAC 2-1.1-1(1).
- (e) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years.

### **Stratospheric Ozone Protection**

#### **C.21 Compliance with 40 CFR 82 and 326 IAC 22-1**

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with the standards for recycling and emissions reduction:

- (a) Persons opening appliances for maintenance, service, repair or disposal must comply with the required practices pursuant to 40 CFR 82.156
- (b) Equipment used during the maintenance, service, repair or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- (c) Persons performing maintenance, service, repair or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

## SECTION D.1

## FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-8-4(10)]:

- (a) One (1) aggregate dryer, known as EU#4 and one (1) natural gas with backup No. 2 fuel oil fired burner, known as EU#5, exhausted to SV#1, equipped with a baghouse, known as EU#19 and a cyclone, known as EU#16, rated at 85.0 million British thermal units per hour.
- (b) One (1) batch pugmill mixer, known as EU#10, capacity: 200 tons of asphalt per hour.
- (c) One (1) cold feed system consisting of cold feed bins and conveyors, capacity: 250 tons of asphalt per hour.
- (d) One (1) hot storage bin and conveyor system, capacity: 200 tons of asphalt per hour.
- (e) One (1) liquid asphalt tank, known as EU#13, equipped with a natural gas fired hot oil transfer heater, rated at 0.700 million British thermal units per hour, capacity: 30,000 gallons of liquid asphalt (deemed an insignificant activity).
- (f) One (1) natural gas fired transfer heater associated with the slat conveyor and the batch plant, known as EU#33, rated at 0.500 million British thermal units per hour (deemed an insignificant activity).
- (g) One No. 2 fuel oil storage tank, known as EU#32, capacity: 8,000 gallons of No. 2 fuel oil.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-8-4(1)]

#### D.1.1 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR 60, Subpart A]

The provisions of 40 CFR 60 Subpart A - General Provisions, which are incorporated as 326 IAC 12-1, apply to the facility described in this section except when otherwise specified in 40 CFR 60 Subpart I.

#### D.1.2 Particulate Matter (PM) [40 CFR 60.90]

Pursuant to the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.90, Subpart I), no owner or operator subject to the provisions of Subpart I shall discharge into the atmosphere from any affected facility any gases which:

- (a) contain particulate matter in excess of 0.04 grains per dry standard cubic foot, equivalent to 13.2 pounds per hour at a flow rate of 56,000 acfm and a temperature of 270 degrees Fahrenheit.
- (b) Exhibit twenty (20%) percent opacity, or greater.

#### D.1.3 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Process Operations), the allowable PM emission rate from asphalt manufacturing operations exhausted through stack SV#1 shall not exceed 58.5 pounds per hour when operating at a process weight rate of 200 tons per hour.

The pounds per hour limitation was calculated with the following equation:



Interpolation and extrapolation of the data for the process weight rate in excess of 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour.}$$

D.1.4  $PM_{10}$  [326 IAC 2-8]

$PM_{10}$  shall be limited to less than 19.6 pounds per hour equivalent to 85.9 tons per consecutive twelve (12) month period.

D.1.5 Sulfur Dioxide ( $SO_2$ ) [326 IAC 2-8-4] [326 IAC 7-1.1-1] [326 IAC 7-2-1]

- (a) Pursuant to 326 IAC 2-8-4, the input of No. 2 fuel oil burned in the dryer/burner shall be limited to less than 2,802,817 gallons per twelve (12) consecutive month period, equivalent to  $SO_2$  emissions of less than 99.5 tons per year.
- (b) Pursuant to 326 IAC 7-1.1 ( $SO_2$  Emissions Limitations) the  $SO_2$  emissions from the eighty-five (85) MMBtu per hour oil-fueled dryer/burner shall not exceed five tenths (0.5) pounds per MMBtu heat input. Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a calendar month average.

D.1.6 Volatile Organic Compounds (VOC) [326 IAC 2-8-4]

- (a) The VOC solvent used as diluent in the liquid binder used in cold mix asphalt production from the plant shall be limited such that no more than 97.9 tons of VOC emissions emitted per twelve (12) consecutive months. This shall be achieved by limiting the total VOC solvent of any one selected binder to not exceed the stated limit in (c) for that binder during the last twelve (12) months. When more than one binder is used, the formula in (c)(6) must be applied so that the total VOC emitted does not exceed 97.9 tons per twelve (12) consecutive month period.
- (b) Liquid binders used in the production of cold mix asphalt shall be defined as follows:
  - (1) Cut back asphalt rapid cure, containing a maximum of 35.0% of the liquid binder by weight of VOC solvent and 95% by weight of VOC solvent evaporating.
  - (2) Cut back asphalt medium cure, containing a maximum of 28.6% of the liquid binder by weight of VOC solvent and 70% by weight of VOC solvent evaporating.
  - (3) Cut back asphalt slow cure, containing a maximum of 20% of the liquid binder by weight of VOC solvent and 25% by weight of VOC solvent evaporating.
  - (4) Emulsified asphalt with solvent, containing a maximum of 15% of liquid binder by weight of VOC solvent and 46.4% by weight of the VOC solvent in the liquid blend evaporating. The percent oil distillate in emulsified asphalt with solvent liquid, as determined by ASTM, must be 7% or less of the total emulsion by volume
  - (5) Other asphalt with solvent binder, containing a maximum 25.9% of the liquid binder of VOC solvent and 2.5% by weight of the VOC solvent evaporating
- (c) The liquid binder used in cold mix asphalt production shall be limited as follows:
  - (1) Cutback asphalt rapid cure liquid binder usage shall not exceed 118 tons of VOC solvent, equivalent to 337 tons of liquid binder at a solvent content of 35% per twelve (12) consecutive month period rolled on a monthly basis.

- (2) Cutback asphalt medium cure liquid binder usage shall not exceed 160 tons of VOC solvent per twelve (12) consecutive month period rolled on a monthly basis.
- (3) Cutback asphalt slow cure liquid binder usage shall not exceed 448 tons of VOC solvent per twelve (12) consecutive month period rolled on a monthly basis.
- (4) Emulsified asphalt with solvent liquid binder usage shall not exceed 241 tons of VOC solvent per twelve (12) consecutive month period rolled on a monthly basis.
- (5) Other asphalt with solvent liquid binder shall not exceed 4,484 tons of VOC solvent per twelve (12) consecutive month period rolled on a monthly basis.
- (6) The VOC solvent allotments in subpart (c)(1) through (c)(5) of this condition shall be adjusted when more than one type of binder is used per twelve (12) month consecutive period rolled on a monthly basis. In order to determine the tons of VOC emitted per each type of binder, use the following formula and divide the tons of VOC solvent used for each type of binder by the corresponding adjustment ratio listed in the table that follows.

$$\frac{\text{Tons of solvent contained in binder}}{\text{Adjustment ratio}} = \text{tons of VOC emitted}$$

Type of binder	tons VOC solvent	adjustment ratio	tons VOC emitted
cutback asphalt rapid cure		1	
cutback asphalt medium cure		1.36	
cutback asphalt slow cure		3.8	
emulsified asphalt		2.04	
other asphalt		38	

The equivalent total tons of VOC of the combined liquid binders shall be less than 118 tons per twelve (12) consecutive month period rolled on a monthly basis.

D.1.7 Volatile Organic Compounds (VOC) [326 IAC 8-5-2]

Pursuant to 326 IAC 8-5-2 (Miscellaneous Operations: asphalt paving), the owner or operator shall: not cause or allow the use of asphalt emulsion containing more than seven (7.0) percent oil distillate by volume of emulsion for any paving application except the following purposes:

- (a) penetrating prime coating
- (b) stockpile storage
- (c) application during the months of November, December, January, February and March

**D.1.8 Preventive Maintenance Plan [326 IAC 2-8-4(9)]**

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the drum mixer/dryer burner and any control devices.

**Compliance Determination Requirements**

**D.1.9 Particulate Matter (PM)**

The baghouse and cyclone for PM control shall be in operation and control emissions from EU#4 and EU#5 at all times that these facilities are in operation.

**D.1.10 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]**

Within 180 days of start-up, in order to demonstrate compliance with Conditions D.1.2, D.1.3 and D.1.4 the Permittee shall perform PM and PM<sub>10</sub> testing utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM<sub>10</sub> includes filterable and condensible PM-10. Testing shall be conducted in accordance with Section C- Performance Testing.

**D.1.11 Sulfur Dioxide Emissions and Sulfur Content**

Compliance shall be determined utilizing one of the following options.

- (a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed five-tenths (0.5) pounds per million Btu heat input by:
  - (1) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification; or
  - (2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
    - (A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
    - (B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.
- (b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the EU#5, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

A determination of noncompliance pursuant to any of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

**Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]**

**D.1.12 Visible Emissions Notations**

- (a) Visible emission notations of the SV#1 stack exhaust shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part

of the operation that would normally be expected to cause the greatest emissions.

- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

#### D.1.13 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouse EU#19 used in conjunction with EU#4 and EU#5, at least once per shift when EU#4 or EU#5 are in operation when venting to the atmosphere. When for any one reading, the pressure drop across EU#19 is outside the normal range of 2.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable steps in accordance with Section C- Compliance Response Plan - Failure to take Response Steps. A pressure reading that is outside the above mentioned range is not a deviation from this permit.. Failure to take response steps in accordance with Section C - Compliance Response Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

#### D.1.14 Baghouse Inspections

An inspection shall be performed each calender quarter of all bags controlling the asphalt production operation when venting to the atmosphere. A baghouse inspection shall be performed within three (3) months of redirecting vents to the atmosphere and every three (3) months thereafter. Inspections are optional when venting indoors. All defective bags shall be replaced.

#### D.1.15 Broken or Failed Bag Detection

In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.
- (b) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

#### D.1.16 Cyclone Inspections

An inspection shall be performed each calender quarter of all cyclones controlling the asphalt

production operation when venting to the atmosphere. A cyclone inspection shall be performed within three (3) months of redirecting vents to the atmosphere and every three (3) months thereafter. Inspections are optional when venting to the indoors.

#### **D.1.17 Cyclone Failure Detection**

In the event that cyclone failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

### **Record Keeping and Reporting Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]**

#### **D.1.18 Cutback Asphalt Production Rate**

To document compliance with Condition D.1.6, the Permittee shall maintain daily records at the source of the following values:

- (a) Amount of liquid binder used in the production of cold mix cutback asphalt; and
- (b) Average diluent content of the liquid binder.

#### **D.1.19 Record Keeping Requirements**

- (a) To document compliance with Condition D.1.12, the Permittee shall maintain records of visible emission notations of the SV#1 exhaust once per shift.
- (b) To document compliance with Condition D.1.13, the Permittee shall maintain the following:
  - (1) Weekly records of the inlet and outlet differential static pressure during normal operation when venting to the atmosphere.
  - (2) Documentation of the dates vents are redirected.
- (c) To document compliance with Condition D.1.5, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken daily and shall be complete and sufficient to establish compliance with the SO<sub>2</sub> emission limits established in Condition D.1.5.
  - (1) Calendar dates covered in the compliance determination period;
  - (2) Actual fuel usage of each fuel used since last compliance determination period and equivalent sulfur dioxide emissions;
  - (3) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period; and

If the fuel supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:

- (4) Fuel supplier certifications;
- (5) The name of the fuel supplier; and

- (6) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.
- (d) To document compliance with Condition D.1.6, the Permittee shall maintain records of the amount of liquid binder used and the daily average diluent content.
- (e) To document compliance with Conditions D.1.14 and D.1.16, the Permittee shall maintain records of the results of the inspections required under Conditions D.1.14 and D.1.16 and the dates the vents are redirected.
- (f) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.20 Record Keeping [326 IAC 12] [40 CFR 60.110b, Subpart Kb]

The one (1) tank, identified as EU#13, with a capacity of 30,000 gallons, shall comply with the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.110b, Subpart Kb). This tank is subject to only 40 CFR Part 60.116b, paragraphs (a) and (b) which requires the Permittee to maintain accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. Records shall be kept for the life of the storage tank.

D.1.21 NSPS Reporting Requirement

Pursuant to the New Source Performance Standards (NSPS), Part 60. 60.90, Subpart I, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:

- (a) Commencement of construction date (no later than 30 days after such date);
- (b) Actual start-up date (within 15 days after such date); and
- (c) Date of performance testing (at least 30 days prior to such date), when required by a condition elsewhere in this permit.

Reports are to be sent to:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, IN 46206-6015

The application and enforcement of these standards have been delegated to the IDEM OAQ. The requirements of 40 CFR Part 60 are also federally enforceable.

D.1.22 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.4(a) and D.1.5 shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)  
CERTIFICATION**

Source Name: Meshberger Brothers Stone Corporation  
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380  
Mailing Address: P.O. Box 345, Berne, Indiana 46711  
FESOP No.: 135-14643-03158

**This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.**

Please check what document is being certified:

- 9 Annual Compliance Certification Letter
- 9 Test Result (specify) \_\_\_\_\_
- 9 Report (specify) \_\_\_\_\_
- 9 Notification (specify) \_\_\_\_\_
- 9 Affidavit (specify) \_\_\_\_\_
- 9 Other (specify) \_\_\_\_\_

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE BRANCH  
100 North Senate Avenue  
P.O. Box 6015  
Indianapolis, Indiana 46206-6015  
Phone: 317-233-5674  
Fax: 317-233-5967**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)  
EMERGENCY OCCURRENCE REPORT**

Source Name: Meshberger Brothers Stone Corporation  
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380  
Mailing Address: P.O. Box 345, Berne, Indiana 46711  
FESOP No.: 135-14643-03158

**This form consists of 2 pages**

**Page 1 of 2**

**9** This is an emergency as defined in 326 IAC 2-7-1(12)  
CThe Permittee must notify the Office of Air Quality (OAQ), within four **(4)** business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and  
CThe Permittee must submit notice in writing or by facsimile within two **(2)** days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:

Control Equipment:

Permit Condition or Operation Limitation in Permit:

Description of the Emergency:

Describe the cause of the Emergency:



If any of the following are not applicable, mark N/A

Page 2 of 2

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency?    Y    N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO <sub>2</sub> , VOC, NO <sub>x</sub> , CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

A certification is not required for this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**FESOP Quarterly Report**

Source Name: Meshberger Brothers Stone Corporation  
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380  
Mailing Address: P.O. Box 345, Berne, Indiana 46711  
FESOP No.: 135-14643-03158  
Facility: Cutback Asphalt Production  
Parameter: VOC  
Limit: 337 tons per twelve (12) consecutive month period of liquid binder equivalent to 97.9 tons per year

YEAR: \_\_\_\_\_

Month	VOC (tons)	VOC (tons)	VOC (tons)
	This Month	Previous 11 Months	12 Month Total

9No deviation occurred in this quarter.

9Deviation/s occurred in this quarter.

Deviation has been reported on:

Submitted by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**FESOP Quarterly Report**

Source Name: Meshberger Brothers Stone Corporation  
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380  
Mailing Address: P.O. Box 345, Berne, Indiana 46711  
FESOP No.: 135-14643-03158  
Facility: dryer/burner  
Parameter: SO<sub>2</sub> when operating on No.2 fuel oil  
Limit: 2,802,817 gallons per twelve (12) consecutive month period, equivalent to SO<sub>2</sub> emissions of less than 99.5 tons per year

YEAR: \_\_\_\_\_

Month	No.2 Fuel Oil (gallons)	No.2 Fuel Oil (gallons)	No.2 Fuel Oil (gallons)
	This Month	Previous 11 Months	12 Month Total

9No deviation occurred in this quarter.

9Deviation/s occurred in this quarter.

Deviation has been reported on:

Submitted by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)  
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Meshberger Brothers Stone Corporation  
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380  
Mailing Address: P.O. Box 345, Berne, Indiana 46711  
FESOP No.: 135-14643-03158

Months: \_\_\_\_\_ to \_\_\_\_\_ Year: \_\_\_\_\_

Page 1 of 2

This report is an affirmation that the source has met all the requirements stated in this permit. This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. Deviations that are required to be reported by an applicable requirement shall be reported according to the schedule stated in the applicable requirement and do not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

9 NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

9 THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

**Permit Requirement** (specify permit condition #)

**Date of Deviation:**

**Duration of Deviation:**

**Number of Deviations:**

**Probable Cause of Deviation:**

**Response Steps Taken:**

**Permit Requirement** (specify permit condition #)

**Date of Deviation:**

**Duration of Deviation:**

**Number of Deviations:**

**Probable Cause of Deviation:**

**Response Steps Taken:**

<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	

<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	

<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.  
Deviation has been reported on: \_\_\_\_\_

Form Completed By: \_\_\_\_\_

Title/Position: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

## Indiana Department of Environmental Management Office of Air Quality

### Addendum to the Technical Support Document for Federally Enforceable State Operating Permit (FESOP)

**Source Name:** Meshberger Brothers Stone Corporation  
**Source Location:** 1972 West State Road 28, Ridgeville, Indiana 47380  
**County:** Randolph  
**SIC Code:** 3159  
**Operation Permit No.:** F 135-14643-03158  
**Permit Reviewer:** Frank P. Castelli

On December 19, 2001, the Office of Air Quality (OAQ) had a notice published in the News Gazette, Winchester, Indiana, stating that Meshberger Brothers Stone Corporation had applied for a Federally Enforceable State Operating Permit (FESOP) to operate a hot mix asphalt plant. The notice also stated that OAQ proposed to issue a FESOP for this operation and provided information on how the public could review the proposed FESOP and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this FESOP should be issued as proposed.

Upon further review, the OAQ has decided to make the following changes to the FESOP: The permit language is changed to read as follows (deleted language appears as ~~strikeouts~~, new language is **bolded**):

#### Change 1:

Condition C.1 has had items (b) and (c) added that pertain to all FESOPs as follows:

#### C.1 Overall Source Limit [326 IAC 2-8]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

- (b) **This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source's potential to emit does not exceed the above specified limits.**
- (c) **Section D of this permit contains independently enforceable provisions to satisfy this requirement.**

#### Change 2:

According to 326 IAC 2-8-6(b), all terms and conditions in a FESOP, including any provisions designed to limit a source's potential to emit, are enforceable by the U.S. EPA; therefore, the following deletions were made to Conditions C.3, C.4, C.5, C.7 and D.1.5 as follows:

#### C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1. ~~326 IAC 4-1-3(a)(2)(A) and (B) are not federally enforceable.~~

C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2(3)]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and in 326 IAC 9-1-2. ~~326 IAC 9-1-2 is not federally enforceable.~~

C.5 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). ~~326 IAC 6-4-2(4) is not federally enforceable.~~

C.7 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted. ~~The provisions of 326 IAC 1-7-2, 326 IAC 1-7-3(c) and (d), 326 IAC 1-7-4(d)(3), (e), and (f), and 326 IAC 1-7-5(d) are not federally enforceable.~~

D.1.5 Sulfur Dioxide (SO<sub>2</sub>) [326 IAC 2-8-4] [326 IAC 7-1.1-1] [326 IAC 7-2-1]

- (a) Pursuant to 326 IAC 2-8-4, the input of No. 2 fuel oil burned in the dryer/burner shall be limited to less than 2,802,817 gallons per twelve (12) consecutive month period, equivalent to SO<sub>2</sub> emissions of less than 99.5 tons per year.
- (b) Pursuant to 326 IAC 7-1.1 (SO<sub>2</sub> Emissions Limitations) the SO<sub>2</sub> emissions from the eighty-five (85) MMBtu per hour oil-fueled dryer/burner shall not exceed five tenths (0.5) pounds per MMBtu heat input. Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a calendar month average. ~~326 IAC 7-1.1 and 326 IAC 7-2-1 are not federally enforceable.~~

Indiana Department of Environmental Management  
Office of Air Quality

Technical Support Document (TSD)  
for a Federally Enforceable State Operating Permit (FESOP)

**Source Background and Description**

<b>Source Name:</b>	<b>Meshberger Brothers Stone Corporation</b>
<b>Source Location:</b>	<b>1972 West State Road 28, Ridgeville, Indiana 47380</b>
<b>County:</b>	<b>Randolph</b>
<b>SIC Code:</b>	<b>3159</b>
<b>Operation Permit No.:</b>	<b>F 135-14643-03158</b>
<b>Permit Reviewer:</b>	<b>Paula M. Cognitore</b>

The Office of Air Quality (OAQ) has reviewed a FESOP application from Meshberger Brothers Stone Corporation relating to the construction and operation of a hot mix asphalt source.

**New Emission Units and Pollution Control Equipment Receiving Prior Approval**

The application includes information relating to the prior approval for the construction and operation of the following equipment pursuant to 326 IAC 2-8-4(11):

- (a) One (1) aggregate dryer, known as EU#4 and one (1) natural gas with backup No. 2 fuel oil fired burner, known as EU#5, exhausted to SV#1, equipped with a baghouse, known as EU#19 and a cyclone, known as EU#16, rated at 85.0 million British thermal units per hour.
- (b) One (1) batch pugmill mixer, known as EU#10, capacity: 200 tons of asphalt per hour.
- (c) One (1) cold feed system consisting of cold feed bins and conveyors, capacity: 250 tons of asphalt per hour.
- (d) One (1) hot storage bin and conveyor system, capacity: 200 tons of asphalt per hour.
- (e) One (1) liquid asphalt tank, known as EU#13, equipped with a natural gas fired hot oil transfer heater, rated at 0.700 million British thermal units per hour, capacity: 30,000 gallons of liquid asphalt (deemed an insignificant activity).
- (f) One (1) natural gas fired transfer heater associated with the slat conveyor and the batch plant, known as EU#33, rated at 0.500 million British thermal units per hour (deemed an insignificant activity).
- (g) One No. 2 fuel oil storage tank, known as EU#32, capacity: 8,000 gallons of No. 2 fuel oil.

**Insignificant Activities**

The source also consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21):



- (a) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.
- (b) A laboratory as defined in 326 IAC 2-7-1(21)(D).

### Existing Approvals

The facility that was originally located at this location and was permitted under F135-5599-03158, issued December 4, 1996, has been completely removed. Therefore, there are no existing approvals issued to this source.

### Enforcement Issue

There are no enforcement actions pending.

### Recommendation

The staff recommends to the Commissioner that the FESOP be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An administratively complete FESOP application for the purposes of this review was received on October 5, 2001. Additional information was received on November 26, 2001.

There was no notice of completeness letter mailed to the source.

### Emission Calculations

See pages 1 through 11 of Appendix A of this document for detailed emissions calculations.

### Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA."

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	28,194
PM <sub>10</sub>	3,981
SO <sub>2</sub>	189
VOC	greater than 100

Pollutant	Potential To Emit (tons/year)
CO	31.7
NO <sub>x</sub>	53.2

Note: For the purpose of determining Title V applicability for particulates, PM<sub>10</sub>, not PM, is the regulated pollutant in consideration.

HAPs	Potential To Emit (tons/year)
Lead Compounds	0.003
TOTAL	6.66

(a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of PM<sub>10</sub>, SO<sub>2</sub> and VOC is equal to or greater than one hundred (100) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

(b) Fugitive Emissions

Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive emissions are not counted toward determination of PSD and Emission Offset applicability.

(c) This source, otherwise required to obtain a Title V permit, has agreed to accept a permit with federally enforceable limits that restrict its PTE to below the Title V emission levels. Therefore, this source will be issued a Federally Enforceable State Operating Permit (FESOP), pursuant to 326 IAC 2-8.

#### Potential to Emit After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Federally Enforceable State Operating Permit.

	Limited Potential to Emit (tons/year)						
Process/facility	PM	PM <sub>10</sub>	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs
Batch Dryer/Burner	35.0 (57.8)	14.1 (85.9)	< 99.5	2.05	31.3	53.2	6.66
Hot Oil Heaters	0.010	0.040	0.003	0.029	0.442	0.526	0.00
Conveying & Handling	2.30	0.230	-	-	-	-	-
Screening	0.033	0.009	-	-	-	-	-
Storage Piles	0.004	0.002	-	-	-	-	-

	<b>Limited Potential to Emit</b> (tons/year)						
Process/facility	PM	PM <sub>10</sub>	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs
Emulsified Asphalt	-	-	-	< 97.9	-	-	-
Roads	59.8	12.8					
Insignificant Activities	1.00	1.00	0.00	0.00	0.00	0.00	0.00
Total Emissions	98.2 (121)	28.2 (<100)	<100	<100	31.7	53.7	Single <10 Total <25

The values in parenthesis reflect the allowable emissions pursuant to NSPS Subpart I for PM and the allowable emissions pursuant to 326 IAC 2-8 for PM<sub>10</sub>. No. 2 fuel oil burned in the dryer will be limited to 2,802,817 gallons per year, equivalent to SO<sub>2</sub> emissions of less than 99.5 tons per year which will insure that the SO<sub>2</sub> emissions from the entire source shall remain less than one hundred (100) tons per year.

#### County Attainment Status

The source is located in Randolph County.

Pollutant	Status
PM <sub>10</sub>	Attainment
SO <sub>2</sub>	Attainment
NO <sub>2</sub>	Attainment
Ozone	Attainment
CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Randolph County has been designated as attainment or unclassifiable for ozone.
- (b) Randolph County has been classified as attainment or unclassifiable for all remaining criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

#### Federal Rule Applicability

- (a) This hot mix bath asphalt plant is subject to the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.90, Subpart I). No owner or operator subject to the provisions of Subpart I shall discharge into the atmosphere from any affected facility any gases which:
  - (1) contain particulate matter in excess of 0.04 grains per dry standard cubic foot, equivalent to 13.2 pounds per hour at a flow rate of 56,000 acfm and a temperature of 270 degrees Fahrenheit.

- (2) exhibit 20 percent opacity, or greater.
- (b) The asphalt storage tank, EU#13, with a capacity of 30,000 gallon is subject to NSPS, 326 IAC 12, (40 CFR Part 60.110b, Subpart Kb) since the tank will be constructed after July 23, 1984. Since the materials stored in this tank has a vapor pressures less than 15.0 kilo-Pascals, this tank is subject to only 40 CFR Part 60.116b, paragraphs (a) and (b) which require record keeping.
- (c) The No. 2 fuel oil storage tank, known as EU#32, is not subject to NSPS, 326 IAC 12, (40 CFR Part 60.110b, Subpart Kb) since the tank has a capacity of 8,000 gallons.
- (d) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14, 326 IAC 20, 40 CFR 61 and 40 CFR Part 63) applicable to this source.

#### **State Rule Applicability - Entire Source**

##### **326 IAC 1-6-3 (Preventive Maintenance Plan)**

The source has submitted a Preventive Maintenance Plan (PMP) on October 5, 2001. This PMP has been verified to fulfill the requirements of 326 IAC 1-6-3 (Preventive Maintenance Plan).

##### **326 IAC 2-2 (Prevention of Significant Deterioration)**

Pursuant to 326 IAC 2-2 this is a minor source. The total limited PM is 151 tons per year which is less than 250 tons per year. Therefore, the requirements of 326 IAC 2-2 do not apply.

##### **326 IAC 2-6 (Emission Reporting)**

This source is located in Randolph County and the potential to emit PM<sub>10</sub> is less than one hundred (100) tons per year. The source is not one of the twenty-eight (28) listed sources and its potential to emit PM<sub>10</sub> is less than one hundred (100) tons per year, including fugitive emissions, therefore, 326 IAC 2-6 does not apply.

##### **326 IAC 2-8-4 (FESOP)**

- (a) Pursuant to this rule, the amount of PM<sub>10</sub>, SO<sub>2</sub> and VOC shall be limited to less than one hundred (100) tons per year. In addition, the amount of a single HAP shall be limited to less than ten (10) tons per year and the combination of all HAPs shall be limited to less than twenty-five (25) tons per year. Therefore, the requirements of 326 IAC 2-7, do not apply.
- (b) No. 2 fuel oil burned in the dryer will be limited to 2,802,817 gallons per year, equivalent to SO<sub>2</sub> emissions of less than 99.5 tons per year which will insure that the SO<sub>2</sub> emissions from the entire source shall remain less than one hundred (100) tons per year.
- (c) The liquid binder usage in the production of emulsified cutback asphalt shall be limited to less than 337 tons per year equivalent to VOC emissions of less than 97.9 tons per year. This will limit the VOC emissions from the entire source to less than one hundred (100) tons per year.
- (d) The potential to emit NO<sub>x</sub> from the entire source is 53.7 tons per year; therefore, a natural gas usage limit is not necessary.

### 326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity limitations), except as provided in 326 IAC 5-1-3 (Temporary alternative opacity limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR Part 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

### 326 IAC 6-5 (Fugitive Particulate Emissions Limitations)

This rule requires a fugitive dust plan to be submitted. The plan was submitted on October 5, 2001 reviewed, and approved and consists of applying water on paved roads and storage piles on an as-needed basis. The source shall comply with all dust abatement measures contained therein.

## State Rule Applicability - Individual Facilities

### 326 IAC 6-3-2 (Process Operations)

The asphalt manufacturing operations are subject to 326 IAC 6-3, Particulate Emission Limitations. 326 IAC 6-3-2 Process Operations limits the particulate matter to  $E = 55.0 P^{0.11} - 40$  or 58.5 pounds per hour for asphalt manufacturing operations with a process weight rate of 200 tons per hour. However, since this PM emission limit of 58.5 pounds per hour is greater than the allowable PM emission rate under NSPS Subpart I of 13.2 pounds per hour, the allowable PM emissions will be limited to 13.2 pounds per hour. The PM emissions after control from the aggregate drying, including combustion, are 7.99 pounds per hour and therefore this operation complies with NSPS Subpart I as well as 326 IAC 6-3-2.

### 326 IAC 7-1.1-2 (Sulfur Dioxide Emission Limitations)

This rule requires levels of sulfur dioxide emissions from the combustion of No.2 distillate fuel oil not to exceed 0.5 pounds per million British thermal units of heat input (the equivalent of 0.5% sulfur content at a higher heating value of 0.138 MMBtu/gal and a maximum heat input rate of 85.0 million British thermal units per hour).

### 326 IAC 7-2-1 (Sulfur Dioxide Compliance: reporting and methods to determine compliance)

Reports of calendar month or annual average sulfur content, heat content, fuel consumption, and sulfur dioxide emission rate shall be provided upon request to the Office of Air Quality.

### 326 IAC 8-5-2 (Miscellaneous Operations: asphalt paving)

No person shall cause or allow the use of asphalt emulsion containing more than seven percent oil distillate by volume of emulsion for any paving application except the following purposes:

- (a) penetrating prime coating,
- (b) stockpile storage, and

- (c) application during the months of November, December, January, February and March.

### Testing Requirements

In order to show compliance with NSPS Subpart I, 326 IAC 6-3-2 and 326 IAC 2-8, PM and PM<sub>10</sub> testing will be required for the drum mixer and dryer burner exhausting through Stack SV#1.

### Compliance Requirements

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this source are as follows:

EU#4 and EU#5 have applicable compliance monitoring conditions as specified below:

- (a) Daily visible emissions notations of EU#4 and EU#5 shall be performed once per shift during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.
- (b) The Permittee shall record the total static pressure drop across the baghouse controlling EU#4 and EU#5, at least once per shift when EU#4 or EU#5 are in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 2.0 to 6.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

- (c) An inspection shall be performed each calendar quarter of all bags controlling the operations at this source when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.
- (d) In the event that bag failure has been observed:
  - (1) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion.
  - (2) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (e) An inspection shall be performed each calendar quarter of the cyclone controlling the asphalt production operation when venting to the atmosphere. A cyclone inspection shall be performed within three (3) months of redirecting vents to the atmosphere and every three (3) months thereafter. Inspections are optional when venting to the indoors.
- (f) In the event that cyclone failure has been observed: Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.
- (g) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

These monitoring conditions are necessary because the baghouse and cyclone must operate properly to ensure compliance with 326 IAC 6-3 (Process Operations), Subpart I and 326 IAC 2-8 (FESOP).

## Conclusion

The construction and operation of this hot mix asphalt facility shall be subject to the conditions of the attached proposed FESOP No.: F 135-14643-03158.

**Appendix A: Emission Calculations**  
**Company Name: Meshberger Brothers Stone Corporation**  
**Plant Location: 1972 West State Road 28, Ridgeville, Indiana 46711**  
**County: Randolph**  
**FESOP: 135-14643**  
**Plt. ID: 135-03158**  
**Date: October 5, 2001**  
**Permit Reviewer: Paula M. Cognitore**

**I. Potential Emissions**

**A. Source emissions before controls**

**Hot Oil Heater on Oil**  
**(oil/<100MMBTU/uncontrolled)**

The following calculations determine the amount of emissions created by #2 & #1 distillate fuel oil @ 0.5 % sulfur, based on 8760 hours of use and AP-42, Tables 1.3-1, 1.3-2, 1.3-3

Pollutant:	<b>0.000</b> MMBtu/hr * 8760 hrs/yr	* Ef (lbs/1000 gal) = (tons/yr)
	<b>141800.0</b> Btu/gal * 2000 lbs/ton	
P M:	2.0 lbs/1000 gal =	<b>0.000</b> tons/yr
PM-10:	3.3 lbs/1000 gal =	<b>0.000</b> tons/yr
S O x:	71.0 lbs/1000 gal =	<b>0.000</b> tons/yr
N O x:	20.0 lbs/1000 gal =	<b>0.000</b> tons/yr
V O C:	0.34 lbs/1000 gal =	<b>0.000</b> tons/yr
C O:	5.0 lbs/1000 gal =	<b>0.000</b> tons/yr

**Hot Oil Heater on Gas**  
**(gas/<100MMBTU/uncontrolled)**

The following calculations determine the amount of emissions created by natural gas combustion, based on 8760 hours of use, AP-42 Ch. 1.4, Tables 1.4-1, 1.4-2, 1.4-3

Pollutant:	<b>1.200</b> MMBtu/hr * 8760 hrs/yr	* Ef (lbs/MMcf) = (tons/yr)
	1000 Btu/cf * 2000 lbs/ton	
2 heaters at 0.5 and 0.7 mmBtu/hr		
P M:	1.9 lbs/MMcf =	<b>0.010</b> tons/yr
P M-10:	7.6 lbs/MMcf =	<b>0.040</b> tons/yr
S O x:	0.6 lbs/MMcf =	<b>0.003</b> tons/yr
N O x:	100.0 lbs/MMcf =	<b>0.526</b> tons/yr
V O C:	5.5 lbs/MMcf =	<b>0.029</b> tons/yr
C O:	84.0 lbs/MMcf =	<b>0.442</b> tons/yr

**Dryer Burner**  
**(gas/<100MMBTU/uncontrolled)**

The following calculations determine the amount of emissions created by natural gas combustion, based on 8760 hours of use, AP-42 Ch. 1.4, Tables 1.4-1, 1.4-2, 1.4-3

Pollutant:	<b>85.000</b> MMBtu/hr * 8760 hrs/yr	* Ef (lbs/MMcf) = (tons/yr)
	1000 Btu/cf * 2000 lbs/ton	
P M:	1.9 lbs/MMcf =	<b>0.7074</b> tons/yr
P M-10:	7.6 lbs/MMcf =	<b>2.829</b> tons/yr
S O x:	0.6 lbs/MMcf =	<b>0.223</b> tons/yr
N O x:	100.0 lbs/MMcf =	<b>37.2300</b> tons/yr
V O C:	5.5 lbs/MMcf =	<b>2.048</b> tons/yr
C O:	84.0 lbs/MMcf =	<b>31.273</b> tons/yr



### Dryer Burner (gas/>100MMBTU/uncontrolled)

The following calculations determine the amount of emissions created by natural gas combustion, based on 8760 hours of use, AP-42 Ch. 1.4, Tables 1.4-1, 1.4-2, 1.4-3

Pollutant:	<b>0.000</b> MMBtu/hr * 8760 hrs/yr	* Ef (lbs/MMcf) (tons/yr)
	1000 Btu/cf * 2000 lbs/ton	
P M:	1.9 lbs/MMcf =	<b>0.000</b> tons/yr
P M-10:	7.6 lbs/MMcf =	<b>0.000</b> tons/yr
S O x:	0.6 lbs/MMcf =	<b>0.000</b> tons/yr
N O x:	280.0 lbs/MMcf =	<b>0.00</b> tons/yr
V O C:	5.5 lbs/MMcf =	<b>0.000</b> tons/yr
C O:	84.0 lbs/MMcf =	<b>0.000</b> tons/yr

Post-NSPS = 190

### Dryer Burner (gas/>100MMBTU/low nox)

The following calculations determine the amount of emissions created by natural gas combustion, based on 8760 hours of use, AP-42 Ch. 1.4, Tables 1.4-1, 1.4-2, 1.4-3 (low NOx burner = 140, flue gas recirculation = 100)

Pollutant:	<b>0.000</b> MMBtu/hr * 8760 hrs/yr	* Ef (lbs/MMcf) (tons/yr)
	1000 Btu/cf * 2000 lbs/ton	
P M:	1.9 lbs/MMcf =	<b>0.000</b> tons/yr
P M-10:	7.6 lbs/MMcf =	<b>0.000</b> tons/yr
S O x:	0.6 lbs/MMcf =	<b>0.000</b> tons/yr
N O x:	140.0 lbs/MMcf =	<b>0.000</b> tons/yr
V O C:	5.5 lbs/MMcf =	<b>0.000</b> tons/yr
C O:	84.0 lb/MMcf =	<b>0.000</b> tons/yr

### (#2 & #1 oil) Dryer Burner <100

The following calculations determine the amount of emissions created by #2 & #1 distillate fuel oil @ **0.5** % sulfur, based on 8760 hours of use and AP-42, Tables 1.3-1, 1.3-2, 1.3-3

Pollutant:	<b>85.0</b> MMBtu/hr * 8760 hrs/yr	* Ef (lbs/1000 gal) = (tons/yr)
	<b>140000.0</b> Btu/gal * 2000 lbs/ton	
P M:	2.0 lbs/1000 gal =	<b>5.319</b> tons/yr
PM-10:	3.3 lbs/1000 gal =	<b>8.776</b> tons/yr
S O x:	71.0 lbs/1000 gal =	<b>188.809</b> tons/yr
N O x:	20.0 lbs/1000 gal =	<b>53.186</b> tons/yr
V O C:	0.34 lbs/1000 gal =	<b>0.904</b> tons/yr
C O:	5.0 lbs/1000 gal =	<b>13.296</b> tons/yr

If Rating >100 mmBtu	
N O x:	<b>24.0</b>
V O C:	<b>0.20</b>

### (#4 oil/ <100MMBTU) Dryer Burner

The following calculations determine the amount of emissions created by #4 distillate fuel oil @ **0.5** % sulfur, based on 8760 hours of use and AP-42, Tables 1.3-1, 1.3-2, 1.3-3

Pollutant:	<b>0.000</b> MMBtu/hr * 8760 hrs/yr	* Ef (lbs/1000 gal) = (tons/yr)
	<b>138000.0</b> Btu/gal * 2000 lbs/ton	
P M:	2.0 lbs/1000 gal =	<b>0.000</b> tons/yr
PM-10:	3.3 lbs/1000 gal =	<b>0.000</b> tons/yr
S O x:	75.0 lbs/1000 gal =	<b>0.000</b> tons/yr
N O x:	20.0 lbs/1000 gal =	<b>0.000</b> tons/yr
V O C:	0.34 lbs/1000 gal =	<b>0.000</b> tons/yr
C O:	5.0 lbs/1000 gal =	<b>0.000</b> tons/yr

**(#4 oil/ >100MMBTU)****Dryer Burner**

The following calculations determine the amount of emissions created by #4 distillate  
 fuel oil @ 0.000 % sulfur, based on 8760 hours of use and AP-42, Tables 1.3-1, 1.3-2, 1.3-3

Pollutant:	<u>0.0</u> MMBtu/hr * 8760 hrs/yr	* Ef (lbs/1000 gal) = (tons/yr)
	<u>0.0</u> Btu/gal * 2000 lbs/ton	
P M:	2.0 lbs/1000 gal =	<u>0.000</u> tons/yr
PM-10:	3.3 lbs/1000 gal =	<u>0.000</u> tons/yr
S O x:	0.0 lbs/1000 gal =	<u>0.000</u> tons/yr
N O x:	24.0 lbs/1000 gal =	<u>0.000</u> tons/yr
V O C:	0.20 lbs/1000 gal =	<u>0.000</u> tons/yr
C O:	5.0 lbs/1000 gal =	<u>0.000</u> tons/yr

**(waste oil/ vaporizing burner)**

The following calculations determine the amount of emissions created by waste  
 fuel oil @ 0.500 % sulfur, based on 8760 hours of use and AP-42, Chapter 1.11

0.000

% Ash

0.000

% Lead

Pollutant:	<u>0.0</u> MMBtu/hr * 8760 hrs/yr	* Ef (lbs/1000 gal) = (tons/yr)
	<u>0.0</u> Btu/gal * 2000 lbs/ton	
P M:	0.0 lbs/1000 gal =	<u>0.000</u> tons/yr
P M-10:	0.0 lbs/1000 gal =	<u>0.000</u> tons/yr
S O x:	50.0 lbs/1000 gal =	<u>0.000</u> tons/yr
N O x:	11.0 lbs/1000 gal =	<u>0.000</u> tons/yr
VOC	1.0 lbs/1000 gal =	<u>0.000</u> tons/yr
C O:	1.7 lbs/1000 gal =	<u>0.000</u> tons/yr
Pb:	0.0 lbs/1000 gal =	<u>0.000</u> tons/yr

**(waste oil/atomizing burner)**

The following calculations determine the amount of emissions created by waste  
 fuel oil @ 0.000 % sulfur, based on 8760 hours of use and AP-42 Chapter 1.11

0.000

% Ash

0.000

% Lead

Pollutant:	<u>0.000</u> MMBtu/hr * 8760 hrs/yr	* Ef (lbs/1000 gal) = (tons/yr)
	<u>0.000</u> Btu/gal * 2000 lbs/ton	
P M:	0.0 lbs/1000 gal =	<u>0.000</u> tons/yr
P M-10:	0.0 lbs/1000 gal =	<u>0.000</u> tons/yr
S O x:	0.0 lbs/1000 gal =	<u>0.000</u> tons/yr
N O x:	16.0 lbs/1000 gal =	<u>0.000</u> tons/yr
VOC	1.0 lbs/1000 gal =	<u>0.000</u> tons/yr
C O:	2.10 lbs/1000 gal =	<u>0.000</u> tons/yr
Pb:	0.00 lbs/1000 gal =	<u>0.000</u> tons/yr

**\*\* aggregate drying: drum-mix plant \*\***

The following calculations determine the amount of emissions created by aggregate drying, based on 8760 hours of use and AP-42, Chapter 11.1, Table 11.1-3, rev. 12/00

P M:	28 lbs/ton x	<u>0.0</u>	tons/hr x	8760 hrs/yr =	<u>0.000</u> tons/yr
		2000	lbs/ton		
P M-10:	6.5 lbs/ton x	<u>0</u>	tons/hr x	8760 hrs/yr =	<u>0.000</u> tons/yr
		2000	lbs/ton		
Lead:	3.30000000E-06 lbs/ton x	<u>0</u>	tons/hr x	8760 hrs/yr =	<u>0.000</u> tons/yr
		2000	lbs/ton		
HAPs:	0.0076 lbs/ton x	<u>0</u>	tons/hr x	8760 hrs/yr =	<u>0.000</u> tons/yr
		2000	lbs/ton		

HAPs include benzene, ethylbenzene, formaldehyde, methyl chloroform, naphthalene, toluene, xylene; arsenic, cadmium, chromium, manganese, mercury, and nickel compounds.

**\*\* aggregate drying: batch-mix plant \*\***

The following calculations determine the amount of emissions created by aggregate drying, based on 8760 hours of use and EPA SCC #3-05-002-05:

P M:	32 lbs/ton x	<u>200.0</u>	tons/hr x	8760 hrs/yr =	<u>28032.0</u> tons/yr
		2000	lbs/ton		
P M-10:	4.5 lbs/ton x	<u>200</u>	tons/hr x	8760 hrs/yr =	<u>3942.0</u> tons/yr
		2000	lbs/ton		
Lead:	3.30000000E-06 lbs/ton x	<u>200</u>	tons/hr x	8760 hrs/yr =	<u>0.003</u> tons/yr
		2000	lbs/ton		
HAPs:	0.0076 lbs/ton x	<u>200</u>	tons/hr x	8760 hrs/yr =	<u>6.658</u> tons/yr
		2000	lbs/ton		

HAPs include benzene, ethylbenzene, formaldehyde, methyl chloroform, naphthalene, toluene, xylene; arsenic, cadmium, chromium, manganese, mercury, and nickel compounds.

**\*\* conveying / handling \*\***

The following calculations determine the amount of emissions created by material handling of aggregate, based on 8760 hours of use and AP-42, Ch 11.19.2

$$E_f = .0032 * \frac{(U/5)^{1.3} * k}{(M/2)^{1.4}} \text{ lbs/ton}$$

where k= 1 (particle size multiplier)  
U = 12 mph mean wind speed (worst case)  
M = 5.0 % moisture

P M :	<u>0.003</u> lbs/ton x	<u>190</u> tons/hr x	8760 hrs/yr =	<u>2.304</u> tons/yr	
		2000 lbs/ton			
P M-10:	10% of PM =			<u>0.230</u> tons/yr	
<b>Screening</b>	PM: <u>190</u> tons/hr x	0.0315 lbs/ton	/ 2000 lbs/ton x	8760 hrs/yr =	<u>26.214</u> tons/yr
	P M-10: 10% of PM =			<u>2.621</u> tons/yr	AP-42 Ch.11.19.2

**\*\* unpaved roads \*\***

The following calculations determine the amount of emissions created by vehicle traffic on unpaved roads, based on 8760 hours of use and AP-42, Ch 11.2.1.

**A. Tri-axle Truck**

4.5 trips/hr x				
0.07 miles/roundtrip x				
8760 hrs/yr =			2884.7 miles per year	
<b>For PM</b>		<b>For PM-10</b>		
10.52	Ef =	{k*[(s/12)^0.8]*[(W/3)^b]/[(Mdry/0.2)^c]}*[(365-p)/365]		
10	=	1.86 lb/mile		
4.8	where k =	2.6 (particle size multiplier for PM-10) (k=10 for PM-30 or TSP)		
0.5	s =	4.8 mean % silt content of unpaved roads		
0.4	b =	0.4 Constant for PM-10 (b = 0.5 for PM-30 or TSP)		
33	c =	0.3 Constant for PM-10 (c = 0.4 for PM-30 or TSP)		
0.2	W =	23.3 tons average vehicle weight		
125	Mdry =	0.2 surface material moisture content, % (default is 0.2 for dry conditions)		
	p =	125 number of days with at least 0.254mm of precipitation (See Figure 13.2.2-1)		
	10.52 lb/mi x	2884.668 mi/yr =	PM	15.17 tons/yr
		2000 lb/ton		
	1.86 lb/mi x	2884.668 mi/yr =	PM-10	2.69 tons/yr
		2000 lb/ton		

**B. Front End Loader**

40.0 trips/hr x				
0.074 miles/roundtrip x				
8760 hrs/yr =			25929.6 miles per year	
<b>For PM</b>		<b>For PM-10</b>		
8.72	Ef =	{k*[(s/12)^0.8]*[(W/3)^b]/[(Mdry/0.2)^c]}*[(365-p)/365]		
10	=	1.77 lb/mile		
4.8	where k =	2.6 (particle size multiplier for PM-10) (k=10 for PM-30 or TSP)		
0.5	s =	4.8 mean % silt content of unpaved roads		
0.4	b =	0.4 Constant for PM-10 (b = 0.5 for PM-30 or TSP)		
23	c =	0.3 Constant for PM-10 (c = 0.4 for PM-30 or TSP)		
0.2	W =	20.4 tons average vehicle weight		
125	Mdry =	0.2 surface material moisture content, % (default is 0.2 for dry conditions)		
	p =	125 number of days with at least 0.254mm of precipitation (See Figure 13.2.2-1)		
	8.72 lb/mi x	25929.6 mi/yr =	PM	113.04 tons/yr
		2000 lb/ton		
	1.77 lb/mi x	25929.6 mi/yr =	PM-10	22.92 tons/yr
		2000 lb/ton		

### C. Semi Truck

0.0 trips/hr x					
0.0 miles/roundtrip x					
8760 hrs/yr =		0.0 miles per year			
<b>For PM</b>	<b>For PM-10</b>				
11.24	$E_f = \{k * [(s/12)^{0.8}] * [(W/3)^b] / [(M_{dry}/0.2)^c] * [(365-p)/365]\}$				
10	= 2.27 lb/mile				
4.8	where k = 2.6 (particle size multiplier for PM-10) (k=10 for PM-30 or TSP)				
0.5	s = 4.8 mean % silt content of unpaved roads				
0.4	b = 0.4 Constant for PM-10 (b = 0.5 for PM-30 or TSP)				
38	c = 0.3 Constant for PM-10 (c = 0.4 for PM-30 or TSP)				
0.2	W = 38 tons average vehicle weight				
125	M <sub>dry</sub> = 0.2 surface material moisture content, % (default is 0.2 for dry conditions)				
	p = 125 number of days with at least 0.254mm of precipitation (See Figure 13.2.2-1)				
	11.24 lb/mi x 0 mi/yr = PM 0.00 tons/yr				
	2000 lb/ton				
	2.27 lb/mi x 0 mi/yr = PM-10 0.00 tons/yr				
	2000 lb/ton				
<b>All Trucking</b>	Total PM: 128.20 tons/yr				
	Total PM-10: 25.61 tons/yr				

### \* \* storage \* \*

The following calculations determine the amount of emissions created by wind erosion of storage stockpiles, based on 8760 hours of use and AP-42, Ch 11.2.3.

$E_f = 1.7 * (s/1.5) * (365-p)/235 * (f/15)$	
= 1.74 lbs/acre/day for sand	
= 1.16 lbs/acre/day for stone	
= 1.16 lbs/acre/day for slag	
= 1.16 lbs/acre/day for gravel	
= 1.16 lbs/acre/day for RAP	
where s = 1.5 % silt for sand	
s = 1.0 % silt of stone	
s = 1.0 % silt of slag	
s = 1.0 % silt of gravel	
s = 1.0 % silt for RAP	
p = 125 days of rain greater than or equal to 0.01 inches	
f = 15 % of wind greater than or equal to 12 mph	
$E_p(\text{storage}) = E_f * sc * (20 \text{ cuft/ton}) * (365 \text{ days/yr})$	
$(2000 \text{ lbs/ton}) * (43560 \text{ sqft/acre}) * (25 \text{ ft})$	
= 0.009 tons/yr for sand	
= 0.000 tons/yr for stone	
= 0.000 tons/yr for slag	
= 0.000 tons/yr for gravel	
= 0.000 tons/yr for RAP	
Total PM: 0.009 tons/yr	
where sc = 1.5 ,000 tons storage capacity for sand	
sc = 0.0 ,000 tons storage capacity for stone	
sc = 0 ,000 tons storage capacity for slag	
sc = 0 ,000 tons storage capacity for gravel	
sc = 0 ,000 tons storage capacity for RAP	

P M-10:	35% of PM =	0.003 tons/yr for sand
	35% of PM =	0.000 tons/yr for stone
	35% of PM =	0.000 tons/yr for slag
	35% of PM =	0.000 tons/yr for gravel
	35% of PM =	0.000 tons/yr for RAP
Total PM-10:		0.003 tons/yr

Emissions before controls (combustion plus production) are as follows:

natural gas		#2 oil		#4 oil	Plus Hot Oil Heater on #2	waste oil	
P M:	28189 tons/yr	P M:	28194.1 tons/yr	P M:	0.000 tons/yr	P M:	0.000 tons/yr
P M-10:	3973 tons/yr	P M-10:	3979.2 tons/yr	P M-10:	0.000 tons/yr	P M-10:	0.000 tons/yr
S O x:	0.227 tons/yr	S O x:	188.8 tons/yr	S O x:	0.000 tons/yr	S O x:	0.000 tons/yr
N O x:	37.8 tons/yr	N O x:	53.2 tons/yr	N O x:	0.000 tons/yr	N O x:	0.000 tons/yr
V O C:	2.077 tons/yr	V O C:	0.904 tons/yr	V O C:	0.000 tons/yr	V O C:	0.000 tons/yr
C O:	31.7 tons/yr	C O:	13.3 tons/yr	C O:	0.000 tons/yr	C O:	0.000 tons/yr
Lead:	0.003 tons/yr	Lead:	0.003 tons/yr	Lead:	0.003 tons/yr	Lead:	0.003 tons/yr
HAPs:	6.66 tons/yr	HAPs:	6.66 tons/yr	HAPs:	0.000 tons/yr	HAPs:	0.000 tons/yr

## B. Source emissions after controls

### dryer combustion: gas

P M:	0.71 tons/yr x	0.00125 emitted after controls =	0.001 tons/yr
P M-10:	2.83 tons/yr x	0.00356 emitted after controls =	0.010 tons/yr

### dryer combustion: #2 oil

P M:	5.32 tons/yr x	0.00125 emitted after controls =	0.007 tons/yr
P M-10:	8.78 tons/yr x	0.00356 emitted after controls =	0.031 tons/yr

### hot oil heater combustion: gas

P M:	0.010 tons/yr x	1.00000 emitted after controls =	0.010 tons/yr
P M-10:	0.040 tons/yr x	1.00000 emitted after controls =	0.040 tons/yr

### hot oil heater combustion: #2 oil

P M:	0.000 tons/yr x	1.00000 emitted after controls =	0.000 tons/yr
P M-10:	0.000 tons/yr x	1.00000 emitted after controls =	0.000 tons/yr

### dryer combustion: #4 oil

P M:	0.00 tons/yr x	1.00000 emitted after controls =	0.000 tons/yr
P M-10:	0.00 tons/yr x	1.00000 emitted after controls =	0.000 tons/yr

### dryer combustion: waste oil

P M:	0.00 tons/yr x	0.000 emitted after controls =	0.000 tons/yr
P M-10:	0.00 tons/yr x	0.000 emitted after controls =	0.000 tons/yr

### aggregate drying:

P M:	28032.00 tons/yr x	0.00125 emitted after controls =	35.040 tons/yr
P M-10:	3942.00 tons/yr x	0.00356 emitted after controls =	14.034 tons/yr

### conveying/handling:

P M:	2.30 tons/yr x	1.000 emitted after controls =	2.304 tons/yr
P M-10:	0.23 tons/yr x	1.000 emitted after controls =	0.230 tons/yr

**screening**

P M:	26.21 tons/yr x	<u>0.00125</u> emitted after controls =	<u>0.033</u> tons/yr
P M-10:	2.62 tons/yr x	<u>0.00356</u> emitted after controls =	<u>0.009</u> tons/yr

**unpaved roads:**

P M:	128.20 tons/yr x	50.00% emitted after controls =	<u>64.102</u> tons/yr
P M-10:	25.61 tons/yr x	50.00% emitted after controls =	<u>12.807</u> tons/yr

**storage:**

P M:	0.009 tons/yr x	50.00% emitted after controls =	<u>0.004</u> tons/yr
P M-10:	0.003 tons/yr x	50.00% emitted after controls =	<u>0.002</u> tons/yr

Emissions after controls (combustion plus production) are as follows:

	Gas	#2 Oil	#4 Oil	Waste Oil	
P M:	<u>101.5</u>	<u>101.5</u>	<u>0.000</u>	<u>0.000</u>	tons/yr
P M-10:	<u>27.1</u>	<u>27.1</u>	<u>0.000</u>	<u>0.000</u>	tons/yr

**II. Allowable Emissions**

A. The following calculations determine compliance with NSPS Subpart I, which limits stack emissions from asphalt plants to 0.04 gr/dscf:

$$\begin{aligned}
 & \frac{0.04 \text{ grains}}{\text{dscf}} * \frac{56000.000 \text{ acfm}}{\text{dscf}} * \frac{460 + \frac{528}{270} \text{ Temp}}{100 - 5 \% \text{ moisture}} * \frac{525600 \text{ minutes}}{\text{year}} * \frac{1}{7000 \text{ grains}} * \frac{1 \text{ ton}}{2000 \text{ lbs}} = \underline{57.784 \text{ tons/yr}} \\
 & \text{To meet NSPS Subpart I, the following value must be } < \text{ amount calculated above} \quad \underline{35.1 \text{ tons/yr}}
 \end{aligned}$$

B. The following calculations determine the maximum sulfur content of distillate #2 fuel oil allowable by 326 IAC 7:

$$\begin{aligned}
 & \text{limit: } 0.5 \text{ lbs/MMBtu} \\
 & 0.5 \text{ lbs/MMBtu} \times \frac{140000.0 \text{ Btu/gal}}{70 \text{ lbs/1000gal}} = \frac{70.0 \text{ lbs/1000gal}}{142.0 \text{ lb/1000 gal}} = \underline{0.493} \\
 & \text{Sulfur content must be less than or equal to } \underline{0.493} \% \text{ to comply with 326 IAC 7} \\
 & \text{and to limit SO}_2 \text{ emissions to 99 tons per year or less.}
 \end{aligned}$$

C. The following calculations determine the maximum sulfur content of residual waste fuel oil allowable by 326-IAC 7:

$$\begin{aligned}
 & \text{limit: } 1.6 \text{ lbs/MMBtu} \\
 & 1.6 \text{ lbs/MMBtu} \times \frac{0.000 \text{ Btu/gal}}{0 \text{ lbs/1000gal}} = \frac{0 \text{ lbs/1000gal}}{100.0 \text{ lbs/1000 gal}} = \underline{0.000} \\
 & \text{Sulfur content must be less than or equal to } \underline{0.000} \% \text{ to comply with 326 IAC 7} \\
 & \text{and to limit SO}_2 \text{ emissions to 99 tons per year or less.}
 \end{aligned}$$

D. The following calculations determine the maximum sulfur content of distillate #4 fuel oil allowable by 326-IAC 7:

limit:	0.5 lbs/MMBtu			
	0.5 lbs/MMBtu x	<u>139000.000</u> Btu/gal=		69.5 lbs/1000gal
	69.5 lbs/1000gal /	<u>150.0</u> lbs/1000 gal =		<u>0.463</u>
		<u>0.463</u> % to comply with 326 IAC 7		

Sulfur content must be less than or equal to  
and to limit SO2 emissions to 99 tons per year or less.

### III. Limited Potential Emissions

#### FUEL USAGE LIMITATION: BASED ON NOx

##### FUEL USAGE LIMITATION FOR HOT OIL HEATER ALONE (OIL)

0.00 <u>tons NOx</u> year	*	2000 <u>lbs</u> ton	=	0.00 <u>lbs NOx</u> year
0 <u>lbs NOx</u> year	/	20 <u>lbs NOx</u> kgal	=	0.00 <u>kgal</u> year
0.00 <u>kgal</u> year	*	99.00 <u>tons/year</u> 0 <u>tons/year</u>	=	0.0 <u>gal fuel</u> year

##### FUEL USAGE LIMITATION FOR BURNER & HEATER (Gas)

37.76 <u>tons NOx</u> year	*	2000 <u>lbs</u> ton	=	75511 <u>lbs NOx</u> year
75511 <u>lbs NOx</u> year	/	100.0 <u>lbs NOx</u> MMcf	=	755.11 <u>MMcf</u> year
755.11 <u>MMcf</u> year	*	<u>99.0</u> <u>tons/yr</u> 37.76 <u>tons/yr</u>	=	0.0 <u>MMcf</u> year FESOP Limit

##### FUEL USAGE LIMITATION FOR BURNER & HEATER (#2 Oil)

53.19 <u>tons NOx</u> year	*	2000 <u>lbs</u> ton	=	106371.43 <u>lbs NOx</u> year
106371.43 <u>lbs NOx</u> year	/	20 <u>lbs</u> 1000 gal	=	5318.57 <u>kgal</u> year
5318.57 <u>kgal</u> year	*	<u>99.0</u> <u>tons/yr</u> 53.19 <u>tons/yr</u>	=	0.0 <u>kgal</u> year FESOP Limit



#### FUEL USAGE LIMITATION FOR BURNER (#4 Oil)

$$\begin{array}{rclclcl}
 0.00 \frac{\text{tons NOx}}{\text{year}} & * & 2000 \frac{\text{lbs}}{\text{ton}} & = & 0.00 \frac{\text{lbs NOx}}{\text{year}} \\
 0.00 \frac{\text{lbs NOx}}{\text{year}} & / & 0.0 \frac{\text{lbs}}{1000 \text{ gal}} & = & 0.00 \frac{\text{kgal}}{\text{year}} \\
 0.00 \frac{\text{kgal}}{\text{year}} & * & \frac{99.0 \text{ tons/yr}}{0.00 \text{ tons/yr}} & = & 0.0 \frac{\text{kgal}}{\text{year}} \text{ FESOP Limit}
 \end{array}$$

#### FUEL USAGE LIMITATION FOR BURNER (Waste Oil)

$$\begin{array}{rclclcl}
 0.00 \frac{\text{tons NOx}}{\text{year}} & * & 2000 \frac{\text{lbs}}{\text{ton}} & = & 0.00 \frac{\text{lbs NOx}}{\text{year}} \\
 0.00 \frac{\text{lbs NOx}}{\text{year}} & / & 0.0 \frac{\text{lbs}}{1000 \text{ gal}} & = & 0.00 \frac{\text{kgal}}{\text{year}} \\
 0.00 \frac{\text{kgal}}{\text{year}} & * & \frac{99.0 \text{ tons/yr}}{0.00 \text{ tons/yr}} & = & 0.0 \frac{\text{kgal}}{\text{year}} \text{ FESOP Limit}
 \end{array}$$

#### FUEL USAGE LIMITATION: BASED ON SO2

##### FUEL USAGE LIMITATION FOR HOT OIL HEATER ON OIL

$$\begin{array}{rclclcl}
 0.00 \frac{\text{tons SO2}}{\text{year}} & * & 2000 \frac{\text{lbs}}{\text{ton}} & = & 0 \frac{\text{lbs SO2}}{\text{year}} \\
 0 \frac{\text{lbs SO2}}{\text{year}} & / & 71.0 \frac{\text{lbs SO2}}{\text{kgal}} & = & 0.00 \frac{\text{kgal}}{\text{year}} \\
 0 \frac{\text{kgal}}{\text{year}} & * & \frac{99.00 \text{ tons/year}}{0 \text{ tons/year}} & = & 0.0 \frac{\text{gal fuel}}{\text{year}}
 \end{array}$$

##### FUEL USAGE LIMITATION FOR BURNER AND HOT OIL HEATER (Gas)

$$\begin{array}{rclclcl}
 0.227 \frac{\text{tons SO2}}{\text{year}} & * & 2000 \frac{\text{lbs}}{\text{ton}} & = & 453.07 \frac{\text{lbs SO2}}{\text{year}} \\
 453.07 \frac{\text{lbs SO2}}{\text{year}} & / & 0.6 \frac{\text{lbs SO2}}{\text{MMcf}} & = & 755.11 \frac{\text{MMcf}}{\text{year}} \\
 755.11 \frac{\text{MMcf}}{\text{year}} & * & \frac{99.0 \text{ tons/yr}}{0.23 \text{ tons/yr}} & = & 0.0 \frac{\text{MMcf}}{\text{year}} \text{ FESOP Limit}
 \end{array}$$

#### FUEL USAGE LIMITATION FOR BURNER & HEATER (#2 Oil)

$$\begin{array}{rclclcl}
 \frac{188.8 \text{ tons SO}_2}{\text{year}} & * & \frac{2000 \text{ lbs}}{\text{ton}} & = & \frac{377618.57 \text{ lbs SO}_2}{\text{year}} \\
 \\ 
 \frac{377618.57 \text{ lbs SO}_2}{\text{year}} & / & \frac{71.0 \text{ lbs}}{1000 \text{ gal}} & = & \frac{5318571.4286 \text{ gal}}{\text{year}} \\
 \\ 
 \frac{5318571.43 \text{ gal}}{\text{year}} & * & \frac{99.5 \text{ tons/yr}}{188.81 \text{ tons/yr}} & = & \frac{2802816.9 \text{ gal}}{\text{year}} \text{ FESOP Limit}
 \end{array}$$

#### FUEL USAGE LIMITATION FOR BURNER (#4 Oil) See Below for calculation of #4 oil limit

$$\begin{array}{rclclcl}
 \frac{0.0 \text{ tons SO}_2}{\text{year}} & * & \frac{2000 \text{ lbs}}{\text{ton}} & = & \frac{0 \text{ lbs SO}_2}{\text{year}} \\
 \\ 
 \frac{0.00 \text{ lbs SO}_2}{\text{year}} & / & \frac{0.0 \text{ lbs}}{1000 \text{ gal}} & = & \frac{0 \text{ gal}}{\text{year}} \\
 \\ 
 \frac{0.00 \text{ gal}}{\text{year}} & * & \frac{99.0 \text{ tons/yr}}{0.00 \text{ tons/yr}} & = & \frac{0.0 \text{ gal}}{\text{year}} \text{ FESOP Limit}
 \end{array}$$

#### FUEL USAGE LIMITATION FOR BURNER (Waste Oil)

$$\begin{array}{rclclcl}
 \frac{0.0 \text{ tons SO}_2}{\text{year}} & * & \frac{2000 \text{ lbs}}{\text{ton}} & = & \frac{0.00 \text{ lbs SO}_2}{\text{year}} \\
 \\ 
 \frac{0.00 \text{ lbs SO}_2}{\text{year}} & / & \frac{0.0 \text{ lbs}}{1000 \text{ gal}} & = & \frac{0.00 \text{ gal}}{\text{year}} \\
 \\ 
 \frac{0.00 \text{ gal}}{\text{year}} & * & \frac{99.0 \text{ tons/yr}}{0.00 \text{ tons/yr}} & = & \frac{0.0 \text{ gal}}{\text{year}} \text{ FESOP Limit}
 \end{array}$$

#### LIQUID BINDER USAGE LIMITATION: BASED ON VOC EMISSIONS FROM CUTBACK ASPHALT

Assume rapid cure and 95% evaporative loss of diluent.      Percent diluent in liquid binder = 35%  
 Average Density Diluent = 7.51 lbs/gal      Average Density of Asphalt Cement = 9.17 lbs/gal

The FESOP VOC emission limit of 100 tons per year minus the worst case sum of emissions from combustion and production = **97.95 tons/yr**

Limited tons of liquid binder = (limited VOC emission rate/95%)/density of diluent \* 2,000 lbs/ton \*(density of diluent + ((1 - %diluent)/%diluent) \* density of asphalt cement) / 2000 lbs/ton)

**LIQUID BINDER USAGE LIMITATION = 337 tons/yr**